Quantum dynamics for classical systems: an application to stock markets

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In a recent book, [1], I have shown how some aspects of several macroscopic systems could be analyzed by using, as dynamical variables, operators acting on finite or infinite-dimensional Hilbert spaces and assuming that the time evolution is driven by a suitable Hamiltonian. This Hamiltonian can be constructed out of the system in a rather straightforward way, by adopting few simple rules.

In this talk we review the general ideas, and then we focus the attention on some results concerning some simplified stock markets. In particular, we will discuss the role of the information before and after the trading procedures start.